Economic Benefits of Right Whale Protection

Kathryn Bisack
Northeast Fisheries Science Center
Woods Hole, MA

Multi-Year Study

- Phase 1/Year 1 – Pilot Study
  - SOW published in June 2004
  - Evaluation Committee met in August
    - Kristy Wallmo
    - Eric Thunberg
    - Charles Fulcher
  - Contract awarded in September 2004

Multi-Year Study

- Phase 1/Year 1 – Pilot Study

  Focus Groups -Boston, Seattle, Denver, SE

  Draft Survey Instrument

  Benefit/Cost Analysis

Multi-Year Study

- Phase 1/Year 1 – Pilot Study (Sept 2004-05)
- Phase 1/Year 2 – Preliminary SurveyDesign
- Phase 2 - Survey Implementation
- Phase 3 - Analysis/Report

Status of North Atlantic Right Whale

- Population ~ 300 animals
- Life History
- PBR =0
- Average mortality 2.07
- Strategic(MMPA) and Endangered(ESA)

Ship Strike of a RW calf

Photo: Protected Species Branch, Northeast Fisheries Science Center, Woods Hole, MA

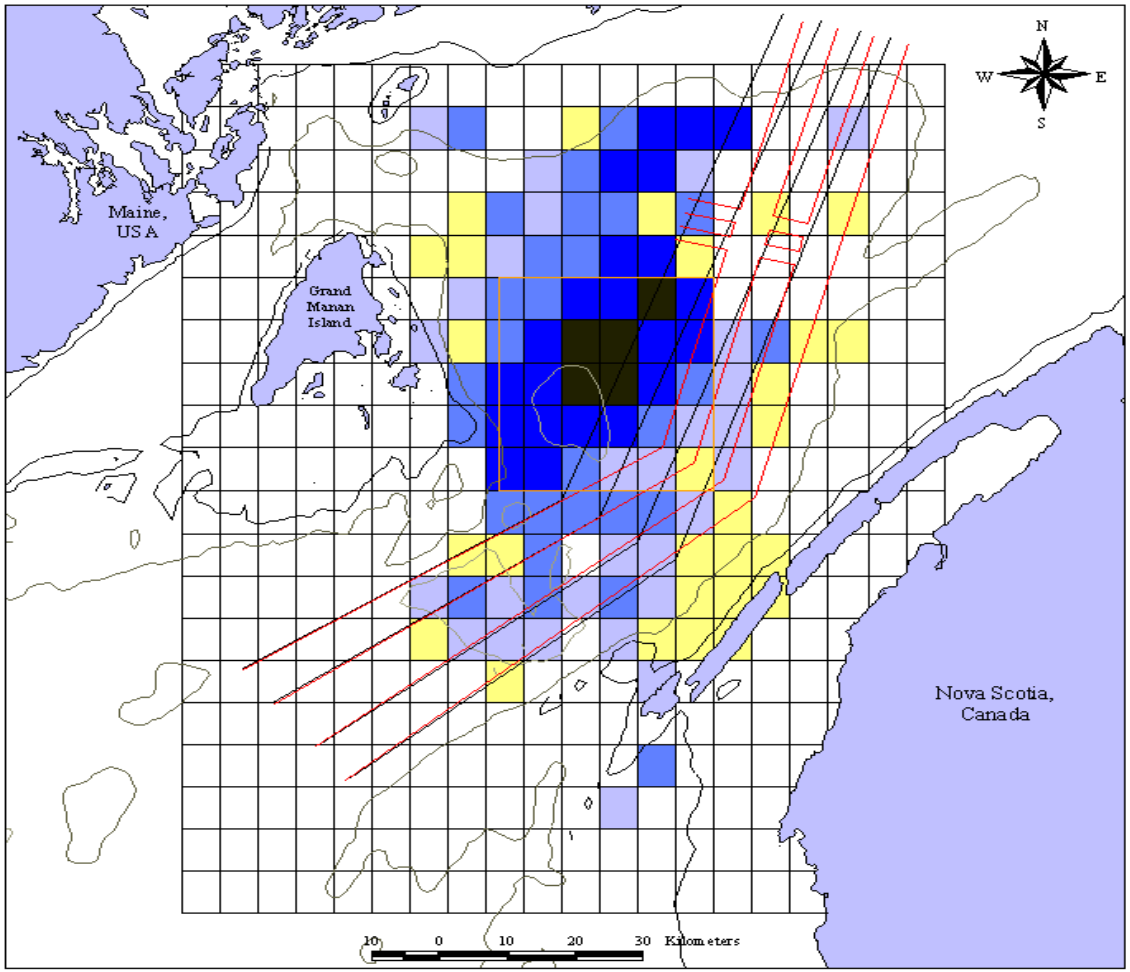
1935
New York
Herald Tribune

1995 Resighted

Likely not to survive due to ship strike.

Photo:Courtesy of Amy Knowlton, New England Aquarium, Boston, MA

Overlay of Shipping Channels and SPUE of Right Whales



Sightings Per Unit Effort of Right Whales in the Bay of Fundy 1987 – 2000

Effort-corrected distribution of right whales in the lower Bay of Fundy/Grand Manan Channel in 1987 - 2000. Survey data from all months were included. An index of sightings per unit effort (SPUE, whales per 1,000 km of survey track) per 3-minute quadrat was created by dividing the number of whales sighted by the total length of survey track. There were 248 quadrats with non-zero effort but no right whale sightings (SPUE = 0), and 111 quadrats with SPUE > 0. The latter quadrats were classified into quartiles, and the upper quartile further subdivided into two classes to show more detail.

- No effort
- Effort > 0, but SPUE = 0 whales/1000 km
- SPUE > 0 but < 15.559 (first quartile)
- SPUE >/= 15.559 but < 61.819 (second quartile)
- SPUE >/= 61.819 but < 171.401 (third quartile)
- SPUE >/= 171.401 but < 678.652 (75th - 95th percentile)
- SPUE >/= 678.652 but < 873.039 (top 5 percent)

- Current Traffic Separation Scheme Boundary
- Proposed Amendment to the Traffic Separation Scheme Boundary
- Bay of Fundy Right Whale Conservation Area Boundary

Bathymetry
- 50 Meters
- 100 Meters
- 200 Meters

Prepared by J. Scaudio Ring
March, 2002
Map is a Mercator projection (central meridian = 66.00). Coastal coverage and bathymetric data obtained from bug.stwrndsbnk.nos.usgs.gov. Effort and SPUE data provided by Robert D. Kenney, Ph.D., University of Rhode Island

GIS MAP: Courtesy of Moira Brown, New England Aquarium, Boston, MA

Gear Entanglement

Management Process and Status

- Fishing Gear Entanglements
  - Take Reduction Team Process
    - Gear modifications, DAMs and SAMs
- Ship Strikes
  - Mandatory Ship Reporting System
  - Right Whale Sighting Advisory System (SAS)
  - Ship Strike Strategy Document
    - Speed reductions in entry/exit of ports
    - Transit between ports

What is challenging about this study?

- Two sources of mortality
- The population will not recover in our lifetime
- We rely on opportunistic data to measure success
- RW rarely seen on whale watching trips
- How does the public value bottlenose dolphins compared to right whales?
- East and west coast RWs protected by ESA
- Other large whales benefit, possibly turtles

Any Suggestions?